Rejection under the first paragraph of 35 USC § 112

Claim 1 was rejected as allegedly containing subject matter not described in the specification, the Examiner alleging that the recitation in claim 1 that features (ii) and (iii) involve the generation of free carboxyl groups is not supported in the instant specification. Applicants respectfully disagree.

The claim language in question is as follows:

> (ii) said cellulose acetate contains at least one member selected from the group consisting of an acid having an acid dissociation exponent pKa of 1.93 to 4.50 in water, an alkali metal salt of said acid, and an alkaline earth metal salt of said acid to generate free carboxyl groups; and
> (iii) said cellulose acetate contains an alkali metal or an alkaline earth metal, wherein the total content of the alkali metal and the alkaline earth metal in 1 gram of the cellulose acetate is 5.5×10^{-6} equivalent or less in terms of ion equivalent, to generate free carboxyl groups.

This language is clearly justified by the overall context of the disclosure herein. It is specifically supported by the teaching

> At least a part of carboxyl groups binding to a cellulose acetate and/or hemicellulose acetate can become in the form of a free acid by using the acid having such acid dissociation exponent pKa or metal salt thereof.

Specification, page 20, lines 22-25. Withdrawal of the rejection under the first paragraph of 35 USC 112 is respectfully solicited.

Rejections under 35 USC § 103(a)

Claims 1-13 and 15-22 were rejected under 35 USC § 103(a) as being unpatentable over US 3,816,150 (Ishii). Claims 18-21 were rejected under 35 USC § 103(a) as being obvious over US 5,240,665 (Seo) in view of Ishii. These rejections are respectfully traversed.

In discussing the rejections, the Office Action of December 21, 2000 alleges that feature (ii) is disclosed in the Ishii reference. Applicants respectfully request confirmation that claims 2 and 3 – which require at least feature (iii) – are allowable over the prior art of record.

Feature (ii), however, is neither disclosed nor suggested by Ishii. Ishii describes a process that involves esterifying cellulose with a polybasic carboxylic acid. The resulting mixed ester of cellulose is then immersed in a solution of a divalent or higher metal salt in order to effect crosslinking, thereby increasing solvent resistance. See Ishii, column 2, lines 37-41.

In the present invention, on the other hand, a cellulose that originally has a carboxyl group is acetylated and then a heat stabilizer (e.g., an alkali metal or alkaline earth metal) is added to the resulting cellulose acetate. The carboxyl group is believed to form a salt with the alkali metal or alkaline earth metal. The carboxyl group of the cellulose acetate is stronger than acetic acid (pKa = 4.73). Therefore, by using (or adding) an acid stronger than acetic acid (having the recited pKa 1.93 to

4.50), the carboxyl group which is believed to form the salt can efficiently be retained in the form of a free carboxyl group.

Thus, the significance and role of the acid of Ishii is quite different from its role in the present invention. It could not have been predicted based upon the teachings of Ishii that carboxyl groups derived from a cellulose raw material could be made to retain the form of free carboxyl groups by the use of acids as specified herein.

Moreover, unexpected beneficial effects are obtained in accordance with the present invention. Ishii fails to teach or suggest the releaseability, optical characteristics, and spinnability that characterize the composition of the present invention. In particular, Ishii requires the treatment of a carboxyl group with a divalent or higher metal salt for high solvent resistance of the cellulose ester. Ishii neither teaches nor suggests that such properties could be obtained by carboxyl group containing cellulose derivative soluble in an organic solvent as required by the present claims.

Clearly, the Ishii reference does not render the present invention *prima facie* obvious. Accordingly, the rejections should be withdrawn.

Conclusion

Reconsideration of the rejections and allowance of the claims of the present application are respectfully solicited. If any issues remain in this

application, the Examiner is invited to contact Richard Gallagher (Reg. No. 28,781) at (703) 205-8008.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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